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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,709	08/23/2000	Yasuhiro Ishibashi	04329.2361	9773

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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP
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EXAMINER	
PATEL, NIKETA I	

ART UNIT	PAPER NUMBER
2182	4

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/643,709	ISHIBASHI, YASUHIRO	
	Examiner	Art Unit	
	Niketa I. Patel	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The Applicant is kindly requested to update the stats of the Japanese Patent Application listed under the "Cross-reference to Related Applications" section on page one of the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 5-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Diaz et al. U.S. Patent Number: 5,809,021 (hereafter referred to as "*Diaz*".)

5. **Referring to claim 1**, *Diaz* teaches a data processing apparatus comprising: a bus for which a band-guaranteed cycle capable of transferring stream data in real time by assigning a predetermined reserved band for each cycle time, is defined [see column 3 - lines 64-67; column 5 - lines 19-46]; a plurality of nodes connected to said bus and capable of transmitting/receiving stream data using the band-guarantee cycle [see column 12 - lines 6-20, 41-58; column 20 - lines 31-40]; means for executing a multi-cast transfer of stream data from a sender node to a plurality of receiver nodes using the band-guaranteed cycle [see column 17 - lines 9-29; column 18 - lines 9-31]; and means for detecting that any of the plurality of receiver nodes drives a signal line in the bus, which indicates a completion of a data transfer cycle [see column 21 - lines 1-39, 'backpressure protocol']; and means for stopping the multi-cast transfer upon detection of said detecting means [see column 21 - lines 37-39.]

6. **Referring to claim 5**, *Diaz* teaches the data processing apparatus, wherein each of the plurality of nodes includes: drive means for driving the signal line into the active state for a predetermined time period when an amount of data stored in a receiving buffer for receiving stream data transferred by the multi-cast transfer, exceeds a given value [see column 21 -

lines 1-10; 36-59], and driving the signal line into an inactive state after the predetermined time period has elapsed [see column 22 - lines 62-67; column 23 - lines 1-24]; and means for monitoring a state of the signal line and inhibiting the drive means from driving the signal line when detecting that the signal line is driven into the active sate by another node [see column 22 - lines 62-67; column 23 - lines 1-24.]

7. **Referring to claim 6**, *Diaz* teaches a data processing apparatus comprising: a bus for which a band-guaranteed cycle capable of transferring stream data in real time by assigning a predetermined reserved band for each cycle time, is defined [see column 3 - lines 64-67; column 5 - lines 19-46]; a plurality of nodes connected to said bus and capable of transmitting/receiving stream data using the band-guaranteed cycle [see column 12 - lines 6-20, 41-58; column 20 - lines 31-40]; means for executing a multi-cast transfer of the stream data from a sender node to a plurality of receiver nodes using the band-guaranteed cycle by assigning one of plurality of channel number to the sender node and the plurality of receiver nodes [see column 17 - lines 9-30; column 18 - lines 9-52]; and means for stopping the multi-cast transfer, when a signal line in the bus, which indicates a completion of a data transfer cycle [see column 21 - lines 1-10, 35-39], is driven into an

active state by any of the plurality of receiver nodes [see column 20 - lines 31-40], wherein each of the plurality of nodes includes: drive means for driving the signal line into the active state for a predetermined time period when an amount of data stored in a receiving buffer for receiving stream data transferred by the multi-cast transfer, exceeds a given value, and driving the signal line in an inactive state after the predetermined time period has elapsed [see column 21 - lines 1-10, 36-39]; and means for monitoring a state of the signal line and inhibiting the drive means form driving the signal line when detecting that the signal line is driven into the active state by another node [see column 22 - lines 62-67; column 23 - lines 1-24.]

8. **Referring to claim 7**, *Diaz* teaches a data transfer control method for controlling a multi-cast transfer of stream data from a sender node to a plurality of receiver nodes, the method comprising the steps of: performing the multi-cast transfer using a band-guaranteed cycle capable of transferring stream data in real time by assigning a predetermined reserved band for each cycle time [see column 3 - lines 64-67; column 5 - lines 19-46]; detecting whether a reception buffer of each receiver node overflows based on an amount of data stored in the reception buffer [see column 21 - lines 1-10; column 22 - lines

62-67; column 23 - lines 1-24]; and driving a signal line in the bus, which indicates a completion of a data transfer cycle, into an active state, when the overflow is detected, in order to stop the multi-cast transfer [see column 21 - lines 1-39, 'backpressure protocol'.]

9. **Referring to claim 8**, *Diaz* teaches the data transfer control method, further comprising a step of monitoring a state of the signal line and driving the signal line into an inactive state for a predetermined time period after the signal line is driven into the active state, thereby accelerating a shift of the signal ling to the inactive state [see column 22 - lines 62-67; column 23 - lines 1-24; column 21 - lines 1-10.]

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diaz et al. U.S. Patent Number: 5,809,021 (hereafter referred to as "*Diaz*".)

12. **Referring to claim 2**, *Diaz* teaches the data processing apparatus, wherein each of the receiver nodes includes an output buffer connected to the signal line to drive the signal line into the active state [see column 21 - lines 1-20], however fails to explicitly set forth the limitation of a pull-down load circuit and a pull-up load circuit is connected to the signal line.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer art to get the advantage of being able to drive signal from active to inactive by using pull-up & pull-down load circuits. It would have been obvious to one or ordinary skill in the art at the time of applicant's invention to include an on/off switch to get this advantage.

13. **Referring to claim 3**, the data processing apparatus of *Diaz* as modified above in claim 2, teaches to further comprising acceleration means for driving the signal line into an inactive state for a predetermined time period after the signal line is driven into the active state by the receiver node in order to

accelerate a shift of the signal line to the inactive state [see column 22 - lines 62-67; column 23 - lines 1-24.]

14. **Referring to claim 4**, the data processing apparatus of *Diaz* as modified above in claim 2, teaches that the plurality of nodes include a manager node for controlling said multi-cast transfer, and the manager node comprises said acceleration means [see column 18 - lines 9-31; column 20 - lines 31-64; column 21 - lines 1-39.]

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents have been made record of to further show the state of the art as it pertains to guaranteed bandwidth transfer cycles:

a. Ramamurthy et al. U.S. Patent Number: 6,046,981

b. Fichou et al. U.S. Patent Number: 6,118,791

c. Ibaraki et al. U.S. Patent Number: 6,590,865

d. Ludtke et al. U.S. Patent Number: 6,501,441

e. Dighe et al. U.S. Patent Number: 5,530,695

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I.

Patel whose telephone number is (703) 305 4893. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (703) 308 3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
03/04/2004

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